This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) Tracking system for flat mobile antenna, comprising ~~of:~~ sensors for angular velocity ~~(1), which~~ to sense the rotation of the antenna around its axes; inclination sensors for measuring the inclination of the antenna toward a vertical axis ~~(2)~~; a control block ~~(3), which calculates~~ to calculate necessary corrections of the direction of antenna beam, ~~which is~~ the control block being connected to outputs of the sensors for angular velocity and the inclination sensors ~~(1, 2)~~ and ~~with~~ to inputs of a driving block ~~(4)~~ and a block for electronic beam control ~~(5)~~; at least one motor ~~(7)~~, for changing the orientation of the antenna, ~~which is~~ the motor being connected ~~with~~ to the output of the driving block ~~(4)~~ and ~~with~~ to an antenna panel ~~(8)~~; and the block for electronic beam control ~~(5), which is~~ being connected ~~with~~ to the antenna panel ~~(8); power supply block, which converts the voltage from the electrical network of the vehicle into suitable values for providing power supply to all blocks of the system~~.

2. (Currently Amended) A system as claimed in 1, wherein the angular velocity sensors comprise three angular velocity sensors, ~~(1a, 1b and 1c) are used, which are~~ collinear to the axes of Cartesian coordinate system, and fixed with the antenna panel ~~(8)~~.

3. (Currently Amended) A system as claimed in 2, wherein ~~using the~~ a forward coordinate transformation is performed with information from the three angular velocity sensors ~~(1a, 1b and 1c) a forward coordinate transformation is performed for obtaining~~ to obtain necessary corrections of azimuth and elevation of the antenna panel ~~(8) as well as~~ and reverse coordinate transformation for applying corrections of offsets of the three angular velocity sensors ~~(1a, 1b, 1c)~~.

4. (Currently Amended) A system as claimed in 2, wherein axes of two of the angular velocity sensors lie in ~~a~~the plane, ~~in which~~ wherein the beam of the antenna panel ~~(8)~~ is tilted, ~~while~~ and the axis of the third angular velocity sensor is orthogonal to ~~this~~ the plane.

5. (Currently Amended) A system as claimed in 1, wherein the antenna panel ~~(8)~~ performs mechanical scanning by one axis, while the antenna beam is positioned by electronic control at a fixed position at the other axis, and the signal strength from two or more positions in a close proximity to direction towards the satellite is used for calculation of correction of offsets of the angular velocity sensors ~~(1a, 1b, 1 c)~~ and for fine adjustment in orientation of the antenna beam by the block for electronic beam control ~~(5)~~.

6. (Currently Amended) A system as claimed in 5, wherein the block for electronic beam control ~~(5)~~ holds the beam~~, which is~~ closest to current satellite direction for maximum allowable time, ~~while holding~~ and holds the beam in ~~the~~ neighboring positions ~~is~~ for minimal time~~, which provides~~ to provide minimum decreasing of average strength of received signal.

7. (Currently Amended) A system as claimed in 1, ~~wherein~~ further comprising applying an additional correction of offsets of two angular velocity sensors ~~(1a, 1b), which~~ wherein the axes lie in a plane, coplanar or near coplanar to a horizontal plane~~, is applied~~.

8. (Currently Amended) A system as claimed in 7, wherein the output values of the two angular velocity sensors ~~(1a, 1 b)~~, ~~which~~ having the axes lie in a plane, coplanar or near coplanar to horizontal plane, are integrated for a certain time interval, and when ~~the~~ a result from integration is positive the offset of corresponding sensor ~~(1a, 1b)~~ is corrected by a certain step in positive direction or when ~~the~~ a result from integration is negative the offset of corresponding sensor ~~(1a, 1b)~~ is corrected by a certain step in a negative direction.

9. (Currently Amended) A system as claimed in 7, wherein the output values of the two angular velocity sensors ~~(1a, 1b)~~, ~~which~~ having the axes lie in a plane, coplanar or near coplanar to horizontal plane, are converted into angular velocities, ~~which~~ having vectors that lie in the horizontal plane, ~~which~~ and having angular velocities ~~are~~ integrated for obtaining inclination angles of axes of ~~aforementioned~~ the two angular velocity sensors, ~~and~~ wherein obtained inclination angles are compared with measurements from inclinometers ~~(2), which~~ to sense the

inclination of ~~aforementioned~~ the axes toward horizontal plane, and ~~the~~ a result from this comparison is used for adjustment of offsets of ~~aforementioned~~ the two angular velocity sensors ~~(1a, 1b)~~.